

the anterior horn in the spinal cord—a fact clearly seen in pigeons.

Fibres which pass from these nuclei into the raphé and so join the anterior pyramids of the medulla are considered the means of union of the nuclei with the cortical tracts. M. A. S.

PHYSIOLOGY OF THE NERVOUS SYSTEM.

The Heat Centre. (*Gazetta Degli Ospitali*, 17th Aug., 1887.)

PROF. GIRARD recently reported upon this subject before the Società Eleveziana Delle Scienze Naturali the result of his experiments upon rabbits. He has come to the conclusion that the cerebral centre of thermogenesis is in the corpora striata. Each lesion of the median portion produced an increase of heat well marked, which was not the result of spasm of the vaso-constrictor nerves of the skin. Exciting this region with electricity, there followed a notable increase of heat, justifying the assertion that increase of heat is the result of excitation and not of paralysis. Moreover, after the puncture and excitation of this region of the brain there was considerable increase of urea in the urine, indicating an increase of combustion in the organism; this was accompanied by a perceptible emaciation of the animal.

Girard localized the centre of heat in the median portion of the corpora striata and down toward the base of the brain, and affirms that this apparatus increases the heat under excitation and notably influenced and regulated the production of heat. He thinks that artificial increase of heat is not identical with that of fever. Increased production, at the same time diminished dispersion, of heat from the body are, according to his view, the two conditions essential to fever.

GRACE PECKHAM.

The Situation of the Emotional Centres. K. PONTOPPIDAN. (*Centralbl. f. Nervenheilk.*, 1887, p. 521.)

There are certain organic brain lesions in which emotional manifestations such as laughing or crying appear without cause; or in which an emotional cause produces undue effects, *e. g.*, a pain produces laughter. Such symptoms are usually associated with symptoms of disease of the pons and medulla. Recent investigations show that the centres affected in such cases are those in the vicinity of the vasomotor centre in the pons. The author describes three such cases. In the first, any question caused the patient to laugh. In the second, laughing or crying occurred indiscriminately when any attempt at conversation was made by the patient. In the third, fits of laughter occurred without apparent cause—the mere entrance of any one into the room would produce one. In two of these cases autopsies showed the existence of apoplectic clots in the crura cerebri and pons Varolii, and other symptoms of pons disease were present.

Is it not more probable that emotional manifestations are simple reflex acts, and that their occurrence on slight cause may indicate not a diseased "emotional centre," but a disturbance in the inhibitory tracts which control the reflex centres? M. A. S.

The Concentration of the Blood as a Condition of Stimulus for the Central Nervous System. (*Lo Sperimentale*, May, 1887.)

At the Royal Physiological Laboratory at Florence DR. IRO Novi made some interesting experiments upon animals to show the effects of concentration of the blood on the nervous system. To do this he injected into the jugular veins of dogs a ten per-cent solution of chloride of sodium, withdrawing from the carotid a similar amount of normal blood. When the amount of chloride of sodium thus added was equivalent to double that found in the blood normally, convulsions occurred in all the muscles of the body.

2. In similar conditions, it did not change hæmoglobin into methæmoglobin. The action in this respect was different from that demonstrated by Marchand for the alkaline chlorates.

3. The peripheral nervous apparatus, muscles and nerves, are not influenced by this condition of the blood, and in the central nervous system, neither the spinal cord nor the medulla, but only the brain is affected.

4. The loss of water which the brain has undergone, especially the gray substance, is the cause of the musculo-nervous system attaining to such a high pitch of excitation.

5. In all probability it is the same cause which produces the convulsions which accompany an analogous but pathological concentration of the blood, as for example in Asiatic cholera.

GRACE PECKHAM.

PATHOLOGY OF THE NERVOUS SYSTEM.

The Brain of the Deaf and Dumb. J. WALDSCHMIDT. (*Allg. Zeitsch f. Psych.*, xliii., 4.)

Waldschmidt describes the brains of two deaf and dumb individuals. In both the operculum, inferior frontal convolution, temporal lobe, and island of Reil were imperfectly developed, and the deficiency was more noticeable in the left hemisphere. The island of Reil in both was noticeable on account of the lack of convolutions, its thinness, and the rudimentary appearance of its anterior portion, and these peculiarities were more marked on the left side. The author believes that such a deficiency in the island of Reil, by impairing the power of conduction of impulses between the temporal and frontal lobes, is sufficient to cause the condition of deafness and dumbness.

The subject needs further observations.